

1. A measuring device for movements on a weaving machine (1), with which measuring device (2) digital signals can be produced at discrete points in time occurring in a periodic sequence, by means of positional determination of one or more identifiable points or positions (31) which are located on a moved surface (30) and within a two dimensional measuring window (3) of the measuring device, these signals being able to be evaluated for determining an interval which can be associated with the changes in position of the identifiable positions,
characterised in that optical and electronic components (21,22,23,20) are integrated in the measuring device for effecting a pattern recognition, in that the identifiable positions can be defined by the pattern recognition, in that the positions of at least some of these positions can be determined at two sequential points in time of the said sequence, in that the interval associated with the changes in position can be calculated at each of the discrete points in time and thus the length of a path (L) travelled by the moved surface and also its speed (v, V) can be determined at these points in time.
2. A measuring device in accordance with claim 1 characterised in that it is arranged for the determination of the warp thread speed (v) at the weaving machine above or below a warp (10') and also between a warp beam (11) and warp thread monitors (16) and in that the warp threads (10) are in contact with an element (4) in the measuring region, through which a transverse oscillation of the warp threads can be suppressed.

3. A measuring device in accordance with claim 1 characterised in that a measuring head of the measuring device (2) is arranged in the region of a cloth take-off (19) where the take-off speed of the cloth (18) which has been produced can be determined.
4. A measuring device in accordance with claim 1 characterised in that a measuring head of the measuring device (2) is arranged at the edge of the warp beam (11) where the rotational speed of the warp beam can be determined.
5. A measuring device in accordance with claim 1 or claim 2, characterised in that the warp (10') at the weaving machine (1) can be drawn off by at least two part warp beams, in that the measuring device (2) includes a plurality of measuring heads, in that each part warp beam is associated with one of the measuring heads, namely for the measuring of the warp thread speeds corresponding to the part warp beams and in that a control unit is part of the weaving machine, by which the warp thread take-off can be synchronised by equalising the warp thread speeds.
6. A method for operating the measuring device (2) in accordance with one of the claims 1 to 5, characterised in that a pattern recognition is carried for the identification of positions (31) out on a moved surface (30) by means of an image sensor (23), in that the positions of at least some of these positions are determined for a periodic sequence of discrete points in time at two sequential points in time and in that one interval associated with the changes in position is calculated at each of the discrete points in time.

7. A method in accordance with claim 6, characterised in that an image processor is used which produces quadrature signals (S_A , S_B) corresponding to the changes in position and in that a length of a path (L) travelled by the moved surface and also its speed (v) is determined at the discrete points in time from the quadrature signals by means of electronic calculation.
8. A method in accordance with claim 7, characterised in that the length of a path (L) travelled by warp threads in the forward direction and also an intermediate speed (V) of the warp threads is determined.
9. A method in accordance with claim 8, characterised in that in determining the mean speed (V) a filter (F), is used, in particular a 1Hz filter.
10. A method in accordance with one of the claims 6 to 9 characterised in that a reverse movement is compensated for without error by filtering and time synchronised sampling with the weaving machine cycle.